#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/Ala Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-011347 Address: 333 Burma Road **Date Inspected:** 25-Dec-2009

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** See below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Tower Components

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW repair welding by 10 to 18mm of layering on various splice plates marked as SSD1-SPSA3-70 located on PCMK south tower, lift 3. Welders were identified as 052075, 053116. ZPMC QC was identified as CWI Wang Chuan Qing (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-345-FCAW-3G(3F)-repair as listed on ZPMC repair report #T-WR2928.

SAW welding of weld joint NSTL4-3B/L-5A located outside PCMK north tower, lift 4, skin B to skin C, between approximately 122M and 125M elevations. Welder was identified as 040460. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SAW welding of weld joint NSTL4-3B/L-5A located outside PCMK north tower, lift 4, skin B to skin C, between approximately 125M and 129M elevations. Welder was identified as 0503060. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

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SAW welding of weld joint NSTL4-3B/L-5A located outside PCMK north tower, lift 4, skin B to skin C, between approximately 129M and 136M elevations. Welder was identified as 052917. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SAW welding of weld joint NSTL4-3B/L-5A located outside PCMK north tower, lift 4, skin B to skin C, between approximately 138M and 144M elevations. Welder was identified as 040252. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

#### Bay 11

This QA Inspector randomly observed the following work in progress in Bay 11:

SAW welding of weld joint WSTL4-2B/L-57A located outside PCMK west tower, lift 4, skin C to skin D, between approximately 127M and 129M elevations. Welder was identified as 041716. ZPMC QC was identified as CWI Liu Xiao Zhong (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Wang Jiang Hua.

SAW welding of weld joint WSTL4-2B/L-57A located outside PCMK west tower, lift 4, skin C to skin D, between approximately 129M and 131M elevations. Welder was identified as 040772. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Wang Jiang Hua.

SAW welding of weld joint WSTL4-2B/L-57A located outside PCMK west tower, lift 4, skin C to skin D, between approximately 131M and 136M elevations. Welder was identified as 202756. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Wang Jiang Hua.

#### Blast Shop #1

This QA Inspector and Caltrans QA Inspector Paul Dawson performed random visual inspections of the upper interior areas of OBG Segment 8AW between panel point 62 to panel point 64 as per ZPMC request number 2345. ZPMC had recently completed grit blasting of these areas and the steel surfaces were mostly free of rust oxide and other contaminants that had previously obscured portions of the plate and weld surfaces. This QA Inspector visually observed approximately 60 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections. The areas were marked with colored chalk and ZPMC had several workers using grinders to remove the visually unacceptable areas and ZPMC had assigned a magnetic particle test (MT) inspector to perform MT of the arc strike removal areas upon completion of grinding the area marked. The obvious arc strikes were marked for grinding and MT.

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Dawson,Paul	QA Reviewer